DOCUMENT RESUME

ED 034 177 AL 002 177

TITLE	English in the Lower Department of the Comprehensive School: Planning of a FOU Project Extending from 1970 to 1979.
INSTITUTION	Swedish National Board of Education, Stockholm.
PUB DATE	Sep 69
NOTE	22p.
AVAILABLE FROM	National Board of Education, Bureau L4, 104 22, Stockholm 22, Sweden
JOURNAL CIT	School Research (Swedish National Board of Education Newsletter); Sep 1969
EDRS PRICE	EDRS Price MF-$0.25 HC-$1.20
DESCRIPTORS	*Bilingual Education, *Elementary Education, *English (Second Language), Experimental Programs, *Language Instruction, *Research Projects, Teaching Methods
IDENTIFIERS	*Sweden

ABSTRACT

This document describes plans for a project investigating the introduction of English as a second language in Swedish schools beginning with the first grade. (English is now introduced as a compulsory foreign language in grade 4.) The primary aim of the Project is "to generally illustrate the effects which occur when the total number of English teaching-hours for the comprehensive school are distributed in different ways throughout the grades." Problems to be dealt with in the Project are to (1) analyze and test different methods for solving the problem of individualization, with emphasis on new ways of utilizing language labs and programmed study materials; (2) analyze the contents of the teaching and the teaching methods from new points of view; (3) develop new methods for measuring language proficiency; (4) develop methods for systematic observations of the interplay between teachers and pupils, and between pupils; (5) study the possibilities of forecasting success in the acquisition of foreign language proficiency; and (6) analyze the functions of the foreign language teacher. Projected investigation, data collecting, staff, and budget are also discussed. (AMM)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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SCHOOL RESEARCH

September 1969 Current projects 1969:5

NOV 14 1969

ED034177

English in the lower department of the Comprehensive school

Planning of a FoU project extending from 1970 to 1979*

Problem

Views have been expressed from several quarters, that the teaching of English should begin in grade 1 (7 year olds). The proposal seems to be based both on educational and psycho-linguistic arguments.

When the comprehensive school reform was carried out in 1962, English was introduced as a compulsory foreign language in grade 4 (11 year olds). At that time the then Secretary of State for Education said that "experiments in the teaching of English to younger children will soon be possible". In the Ministry of Education proposal 129 of 1968 emphasis is put (page 67) on the considerable value of beginning the teaching of foreign languages in the lower department, and on page 70 it is pointed out that English should be commenced before grade 3 (10 year olds).

Various organizations were given the opportunity of commenting on the Board of Educations proposals for revised objectives and outlines of syllabus for the teaching of languages. The Swedish TUC pointed out the importance of modern laguage studies, were positive to the proposals put forward by the Board of Education, and specially emphasized that English should in the future, be intro-

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* This document gives as an example of project planning, an account of plans for a project, not yet commenced, in the Board of Education´s school research programme. The planning has been carried out under the direction of Professor Karl-George Ahlström, Pedagogic Institute, Department of Language Learning, Vaksalagatan 30, 753 31 Uppsala.

duced in grades 1-2. The Swedish Association of Professional Organisations stressed the necessity of trying to teach English in grade 1, as well as introducing the 2nd and 3rd foreign language in the intermediate department of the comprehensive school.

Some linguistic psychologists and educationalists are of the opinion that he earlier the teaching of a foreign language is begun, the better the results. For example a MLA conference in 1956 formulated the following point of view: "The optimum age for beginning the continuous learning of a second language seems to fall within the span of ages four through eight with superior perfomance to be anticipated at ages 8, 9 and 10. In this early period the brain seems to have the greatest plasticity and specialized capacity needed for acquiring speech" (Levenson & Kendrick, 1967, p. 58).

Carroll (1963) is somewhat less rigid in his survey of the present state of research: "The evidence seems clear that the earlier the child is introduced to a foreign language, the better his pronunciation will be, other things being equal" (Ibid. p. 1 091). However he does not seem to be completely sure of the argumentation, as in a note to this statement he gives the results of a Japanese investigation which contradicts this conclusion. On the assimilation of other spects of the foreign language, he says "On the other hand, there is no good evidence that children learn other aspects of language any better or faster when account is taken of the amount of time they spend on learning" (Ibid. op.cit.). Thus Carroll thinks it probable that an earlier introduction of language teaching has positive effects, especially on pronounciation.

In contrast, Penfield seems to mean that all aspects of the language as an oral means of communication are more easerly learnt before the child has left that stage of development which Piaget calls the stage of concrete operations and reaches the formal operations stage (i.e. at about 10) (Penfield and Roberts 1959). Penfield´s theory is based on observations of brain physiology and is thus indirect has however been severely criticized (Milner, 1960).

Ervin and Osgood's distinction between "compound bilinguals" and "coordinate bilinguals (Ervin and Osgood, 1954) and Lambert's investigations of command of language among these two types of bilingual individuals (Lambert, 1956, Lambert, Havelka & Crosby, 1958) have also been put forward as support for the theory that the teaching of foreign languages should be commenced at as early an age as possible. For example Van Parreren (1963) points out, with reference to these investigations that the longer the interval between learning the first language and a foreign language, the greater the probability that the first language will function as a link between stimuli and reactions in the foreign language. On the other hand, the shorter the interval, the greater the chance that both language systems will function independently of each other.

There is however, no certain evidence that a foreign language is learnt more quickly and correctly at an earlier age. There is evidence that the oral linguistic production, especially from the phonological point of view is favoured by early training. But is the learning of other aspects of language ability also influenced positively? Even if proof of this could be obtained, it does not imply that it would be better to begin the teaching of languages earlier, as we do not know how this will effect knowledge and ability in other subjects. In the symposium dealing with research into educational materials and education planning which the Scandinavian Cultural Commission held at Kungälv, Sweden from 7th to 10th October, 1968, the following point of view was put forward in the discussion on language teaching. "The question of the optimal moment to begin the learning of a foreign language is a multi-dimensional problem which requires a more detailed exploration by means of research, even if finally it is a matter of evaluation. The problem can, and should be, examined from several points of view such as the neurophysiological, educational, cultural and economic. The optimal moment for the commencement of language learning should be decided by an evaluation of how the objectives aimed at, both the cognitive and affective, can be achieved in the shortest possible time". (Vormeland, Levin et.al., 1968, p 2).

The group also stressed that "With reference to the verified insufficient knowledge in this field we recommend a qualified survey of the literature ..... Qualified in this context means that the person carrying out the survey shall take a critical standpoint to the relevance of the different research results and experiments for the production of educational material, and also to evaluate the design and method of the experiment". (Ibid.).

Relation to earlier experiments

The main task during the initial stage of the project is to carry out a broad analysis of previous research. In this way it will be possible to relate this to some outstanding earlier surveys. Thus there exists an international biography of research during the period 1945-64 dealing with language teaching problems. This biography which was compiled by Nostrand et.al. (1905) is excellently supplemented by Carroll's critical examination of research methods and finding up to 1960 in the same field. (Carroll, 1963). Large-scale surveys of research in certain specified educational questions within the same field have been carried out by Grothers and Suppes (1967) and Lane (1968). In the extensive literature on FLES (Foreign Language in the Elementary School) a series of methods are given which may eventually be useful to the current project (Levenson & Kendrick, 1967).

Accounts of the points of view on the optimum time to begin the teaching of foreign languages are given in a research survey by Carroll (1960). In Sweden this problem has been examined in reports by Ekstrand (1964) and Malmqvist (1967), who both evaluate experiments with English in the lower department with reference to Axelsson & Gorosch (1959). "English without a textbook" (in Swedish).

In order to obtain new methods of approach to the problem of the optimal moment to introduce a foreign language and to develope the material-method system in English, based on well-established theories to the extent they exist, it would seem to be necessary to follow the developments within experimental psycholinguistic research and research into the general educational problems of teaching a foreign language. Special notice should however be paid to methods and findings in the following fields of study.

(1) Studies of bilingualism. The question of the eventual positive and negative effects which bilingualism has on learning of, and proficiency in, other school subjects is of prime importance for bilingual research. The introduction of foreign languages must be regarded as an attempt to create bilingualism, and for that reason there is a need to analyse extensive research literature in bilingualism, and examine the conditions under which the above-mentioned positive and negative effects occur. An investigation of these relationships would provide a firm basis for decisions on how different steps should be taken in the current project in order tc maximize the positive effects of teaching English and minimize the negative effects on other subjects.

Surveys of research into bilingualism can be found in McNamara (1966), Lambert (1956) and Hansegård (1968). In this research, especially that carried out by Lambert's group, methods have been used which seem to make it possible to decide to what degree reactions to linguistic stimuli originating from the secondary language are transferred via the primary language or not. As this problem is of central importance in modern language teaching with its dissociation from translation as a method of acquiring linguistic competence, it is necessary to follow the development of such measurement methods and to analyse their eventual applicability when evaluating the teaching of foreign languages.

(2) Studies of the development sequence when assimulating grammatical structure. During the last 10 years extensive studies have been carried out, mainly in the USA of how children spontaneously learn the morphology and syntax of their mother tongue

(see Griffin, 1968, Ahlström, 1968). One aspect of the investigations, based on studies by Berko (1958) and Brown and Berko (1960) shows in which order certain morphological and syntactical regularities occur in the spontaneous speech of children and the changes in the direction to the morphology and syntax of adults which occurs as the children grow older. As we can assume that the chronological sequence in which the grammatical structure of grown-ups occurs in childrens' language reflects partly how important they are for the transportation of information and partly how simple they are to learn, these investigations can provide information about the order in which various grammatical structures should be introduced when teaching English. To the extent which analogous investigations of Swedish linguistic usage exist, these should also be studied, as it is of course important, when introducing alien grammatical structures, to know what linguistic level the children have in their own mother tongue.

Another line of investigation dealt with learning of grammatic structures and their use in spontaneous speech had developed parallel to those mentioned above. These originated in the analyses carried out by Brown and Bellugi (1964) and Ervin (1964) of the learning of syntax. By observing and analysing conversations between children and adults in natural situations a considerable body of knowledge has been obtained about the role which imitation, and adult reaction to what the child says, plays in the learning process. It seems reasonable that these findings will provide valuable information, both to decide the balance between imitative methods and dialogues in teaching and for methods to rectify mistakes.

Both observation and measurement methods used in both the above--named types of investigations deviate in important respects from conventional methods of evaluating the effects of teaching foreign languages. There is therefore every reason to examine these methods and analyse to what extent they are applicable to the evaluations which will be made in the project in question.

(3) Educational method experiment dealing with the learning of grammatical structures in a foreign language. Lim, 1968, has carried out a critical examination of these experiments and also gives an account of his own "miniature" experiment. This deals with methods to activate pupils, comparison between picture and text in pattern exercises and between types of grammatical models.

Aim of the project

The primary aim of the project is to generally illustrate the effects which occur when the total number of English teaching--hours for the comprehensive school are distributed in different ways throughout the grades. At present 21 hours a week are devoted to English. These hours can be distributed approximately equally through all grades from grade 1, or they can, as is now the case, be concentrated to grades 4-9. Starting English in grade 1 is thus only one of the alternatives which may be tested. The construction of different alternatives for the distribution of hours, and the choice between those which should be compared, must be carried out from theoretical and practical considerations which cannot be specified at the moment. For example, consideration must be given to wishes for suitable hour distribution in other subjects.

A general illustration of the effects means in this context that an evaluation should be made of attainment of different partial objectives in the teaching of English (cognitive, affective and psychomotoric), and also of corresponding long-term objectives (which will be finally evaluated in grade 9), and also that any positive and negative effects spreading to other subjects must be investigated.

In order to be able to carry out the project, thorough development work is required for the material and methods used in the teaching of English. The objectives of this work must be, in all the organizational variants which are compared, to try to optimize the effects of teaching, so that the experimental effects can be "traced back" to the variation in the time-table. So,

for example, the teaching of beginners must be expected to be radically different in those cases where teaching begins in grade 1 and when it begins in grade 4, for in the latter case it can be assumed that the pupils already have developed reading and writing skills, which is not the case in grade 1. Optimization must take place not only with reference to English. To the extent that transfer of effects to other subjects can be expected, it would seem to be essential to try to optimize these effects as well.

In order to illustrate the central problem for the project, it is thus necessary to produce certain material-method systems. These systems however must be regarded as models, which naturally can be translated into a material-method package suitable for production. There is at the moment no intention of extending development work to the production stage, and the costs for such development work are not included in the budget.

When developing these models, the choice between alternative teaching methods can only to a very limited degree be based on experiments carried out within the framework of the project. In the main, standpoints must be taken up with reference to observations and experiences obtained in previous investgations, and to considerations based on the psychology of learning, psycholinguistics and development psychology. The reason for the emphasis in the project on the examination of the literature is to obtain a theoretical basis for the methodic principles which will be used.

At the moment, we can list the following problems which must be dealt with in the project.

1 To analyse and test different methods for solving the problem of individualization. Special emphasis will be laid on finding new ways of utilizing language laboratories and programmed study material.

2 To analyse the contents of the teaching from new points of view, in which special attention will be paid to the selection of language situations, and thus the vocabulary and grammatical structure will be questions of prime importance.

3 To analyse teaching methods from new points of view. Above all, a decision must be made about the balance to be kept between "imitative" and "generative" methods, to the importance which is to be given to the formal behaviour repertoire at different stages, and the apposite moment for the introduction of the written language. Especially important in this connection are the teaching experiments in foreign languages carried out by McKinnon, 1965, and Lim, 1968, and the investigations at present being carried out at the Institute of Education in Gothenburg on the learning of grammatical structures.

4 To develope new methods for measuring language proficiency. One investigation of special interest is looking at the possibilities of utilizing methods used in the study of the thought processes of bilingual individuals (see Lambert, 1956) and childrens' acquisition of morphological and syntactical rules in their mother tongue. (See e.g. Berko, 1968, Brown & Berko, 1960).

5 To develope methods for systematic observations of the interplay between teachers and pupils and between pupils. Reference can here be made to methods tested within the UME project and at the Gothenburg Institute of Education.

6 To study the possibilities of forecasting success in the acquisition of proficiency in foreign languages. There is a considerable body of evidence that the ability to learn a foreign language in natural situations is almost independent of general intellectual ability and is also independent of such linguistic ability factors which can be measured with a conventional intelligence test. (Carroll, 1962). This problem should naturally be examined as well as the problem of the possibility to predict

progress in the B language from performance in the acquisition of the A language. The educational implications of these observations are naturally very interesting.

7 To analyse the functions of teachers when teaching foreign languages. A natural sequence to the problems in 1-5 above is that they lead to an analysis of what should form part of teacher training, particularly in the lower division, since the evaluation should not only deal with the knowledge and ability of the pupils but also the requirements which teaching places on the teachers. The result of this objectives analysis should obviously be used when training teachers for the lower division.

Carrying out the project

During the 1969-1970 school year, some preparations are to be made for the project, investigation of the literature, planning together with different groups of specialists (e.g. lecturers in subject methods) and certain selective investigations. The investigation plan presented here is based on the assumption that the projected preparatory work can be carried out. If this assumption is proved to be false, certain modifications must be made in the plan.

(a) Investigation plan

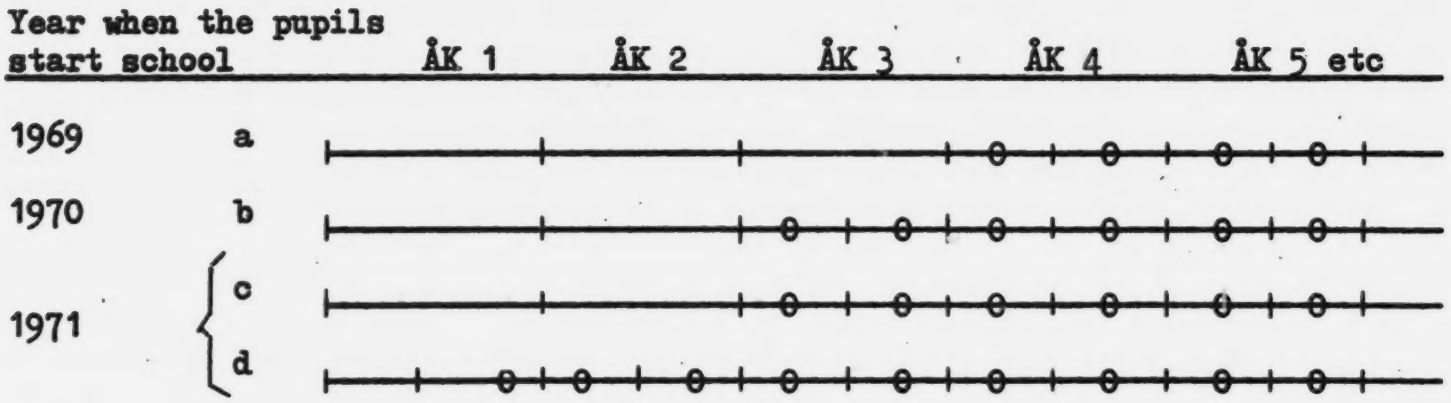
The schools years 1969/70 and 1970/71 will be devoted to investigating the literature, developing the material-method system, preliminary testing of methodic ideas in schools where English teaching is already carried on from grade 1, and the collection of pupil data in schools which will be included in the experiment.

Pupils who start school in 1970 will receive instruction in English in the autumn term of 1972, that is in grade 3. If it is thought necessary to measure the effects of the teaching of English which was commenced in grade 4, it will be necessary to examine pupils who commenced school before 1970. In order

to measure the progress from the start of the term in other subjects than English, a group of pupils who commenced school in 1969 and English in grade 4 should be selected and followed-up. The same process will be carried out with a group of pupils who start school in 1970 and thus will begin English in grade 3. Successive measurements of proficiency are to be carried out especially in Swedish and mathematics, and in English when teaching in that subject begins.

Among the pupils who will commence their schooling in 1971 two identical groups will be selected, from which analogous measurements will be made. One group will begin English in grade 3 and will thus form a control group to the corresponding group which commenced schooling in 1970. By then sufficient material should have been obtained to make certain changes in the contents and lay-out of the teaching, and these changes can be carried out in order to optimize the results of the investigation. In the other group, English is commenced in the spring term in grade 1.

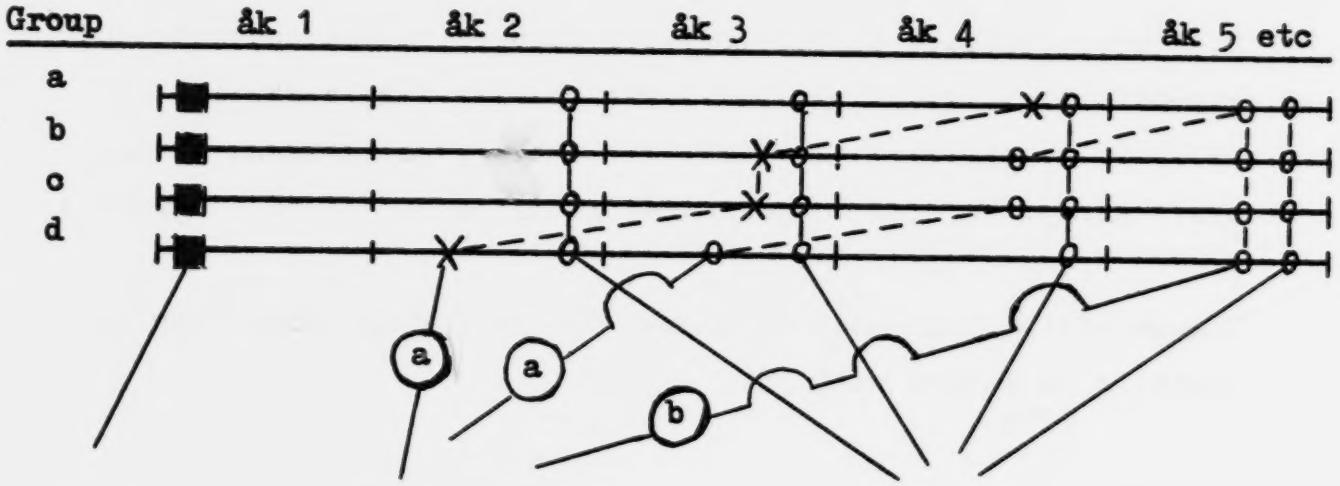
The investigations will thus have the following shape (English teaching is marked with 0).



By allowing these groups to be together in the same schools, a certain uniformity is obtained in the selection of pupils and teachers, as well as greater administrative advantages. The investigation population can, for example, consist of schools in the Uppsala region, and this will reduce investigation costs. The selection of schools must however take place with reference

to the supply of teachers qualified to teach English in the lower department.

It is thus a question of four longitudinal investigations. The final criterion of the result of the experiment will be obtained first i grade 9 when all groups will have had the same total numbers of hours instruction in English. Some comparisons can be made considerably earlier as measurements will successively be carried out in each experiment group. Some of these measurements will have exactly the same contents and will be applied after an exactly similar period of English teaching in the different groups. In principle the following plan will be used for measuring the results.



Basic school maturity test

Measurement of proficiency in English with identical tests
(a) In different grades
(b) In the same grade

Control measurements in subjects other than English and measurement of attitudes and ability factors

When carrying out measurements of type "a", tests must be used which as far as possible place exactly the same requirements on the pupils' qualifications in reading and writing, since the pupils in the different groups will have trained-up these skills to different extents. For measurements of type "b", the test text can be used, but the test series should also include a text-free test. By comparing the results of these two tests with each other, it should be possible to estimate to what degree skill assimulation is a function of the amount of training or of maturity.

The control measurements aim at estimating the positive and negative effects of the teaching of English on other subjects, the possibility of predicting success in language learning from ability tests, changes in attitudes at different ages, and of the relationship between the preferences for different subjects, and the point of time for commencing the study of English.

In order to be able to calibrate the groups, a certain measurement of their initial position in grade 1 is required. This requirement can be satisfied by applying a high-quality school maturity test, preferably in the middle of the autumn term in grade 1. The result of this can be used statistically to increase the precision of comparisons made at a later date.

Transition to the upper department can be regarded as a first termination of the experiment, as the experimental groups will be split up, but it should be reasonably possible to follow the pupils individually through the upper department, even if this causes some methodic problems, so that the end of grade 9 can be the absolute termination of the experiment.

(b) Investigation groups

The composition of the four groups for the experiment can be seen from what has been said above. It is obvious that these groups must be relatively large so that the effects of pupils changing schools etc. can be minimized. Detailed discussions must be held with the school authorities to decide how the groups shall be selected. In addition to these four main groups, some other groups of pupils must be utilized for certain selective investigations, during which proposed teaching methods and tests are tested. It would seem reasonable to select these groups from schools in which English is already taught from grade 1.

(c) Data and tests

As the formulation of tests is a central task in the first part of the project, this cannot be described in detail at the moment.

It can be seen from (a) above that in order to grade the pupils there will be four types of tests, viz. measurement of intellectual level, measurement of different proficiencies in English, measurement of knowledge and proficiencies in other subjects and measurement of attitudes to teaching in different subjects. In addition to the pupil grading tests, observation of behaviour in teachers and pupils during the lessons should also take place. In fact the systematic behavioural observations can give at least as much valuable data as the more objective proficiency measurements, to the extent they can be carried out in such a way as to, in fact, give a correct desciption of the teaching process. The formulation of observational methods must therefore also be an important task in the commencement phase of the project. Process investigation can be designed as a part of teacher training and should form a valuable contribution to it.

(d) Analysis

At this stage in the project it is impossible to work out a detailed plan of analysis. It should however be emphazised that with a continual following-up of the same pupils, a whole series of different types of analyses can be carried out and a number of problems, not specified here, approached and formulated as work projects for students taking i higher degree in Education.

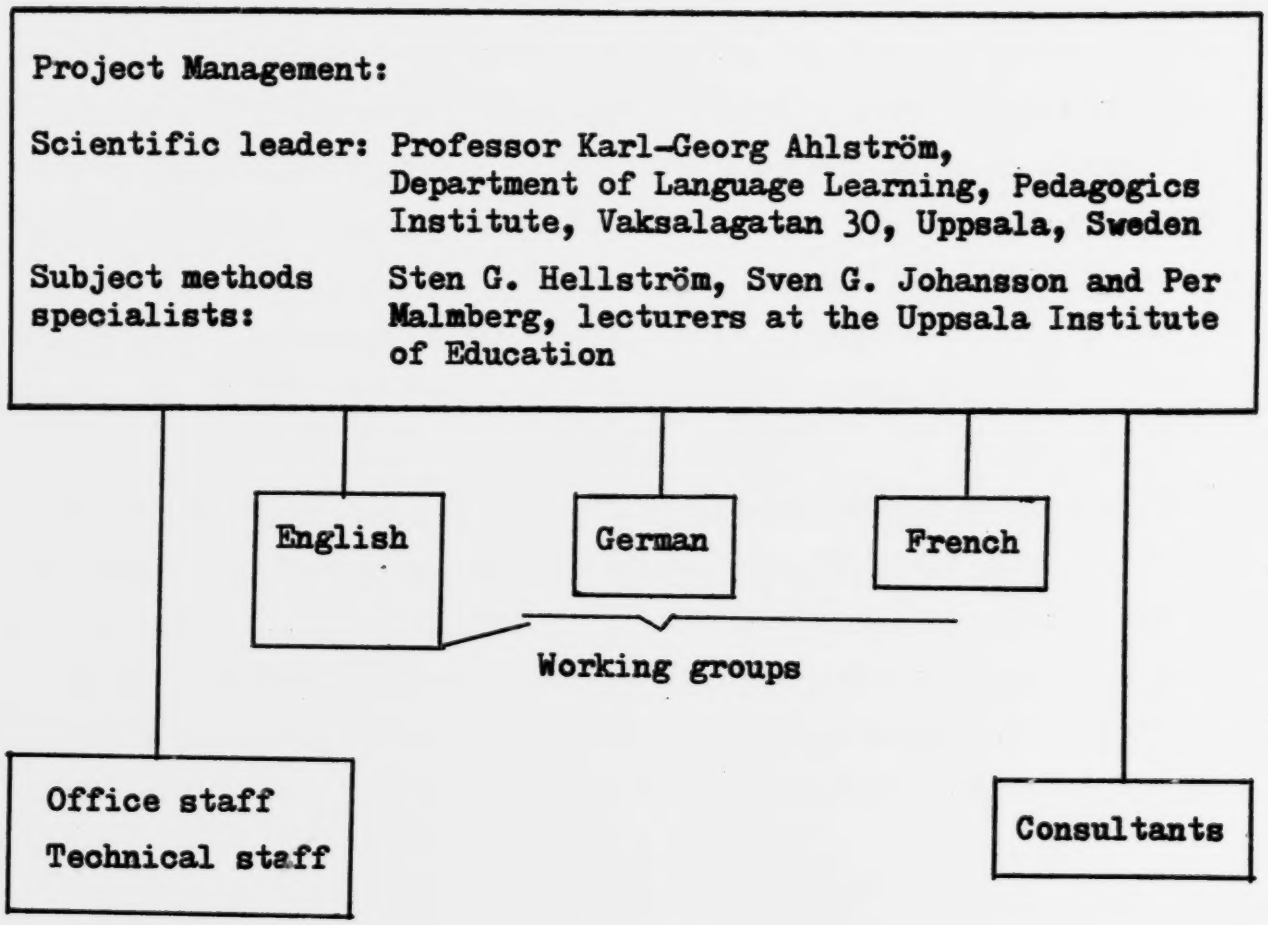
(e) Time plan

Paragraph (a) above gives details of the time plan. During the years 1970-73 about half of the total effort will be divided between material preparation, and carrying out investigations. In the following year material preparation will be successively reduced. This means that the proportion of the funds available for subject teachers will increase each year. The first termination for the project is 1976 and the final termination 1979.

Staff

As the project will extend over a period of years, it would seem to be important to have a permanent organization from the begin-

ning. The organization specified below will not be completely staffed from the start of the project, and it will only be completely staffed during certain periods of the project time. The reason for this will be stated later.


Project Management:
Scientific leader: Professor Karl-Georg Ahlström, Department of Language Learning, Pedagogics Institute, Vaksalagatan 30, Uppsala, Sweden
Subject methods specialists: Sten G. Hellström, Sven G. Johansson and Per Malmberg, lecturers at the Uppsala Institute of Education
English
German
French
Working groups
Office staff
Technical staff
Consultants

Composition and work tasks of the project management. The project management consists of a subject educationalist and three subject specialists who are lecturers in subject methods at the Uppsala Institute of Education. These subject specialists would like to have leave of absence from their posts for certain periods.

The composition and assignments of the working groups. The working groups will follow the directives issued by the project management, e.g. carry out research in the literature in accordance with the directions of the project group, formulate concrete proposals for the material-method system in accordance with given directives, carry out investigations, collect the results from these and draw up draft reports in accordance with instruction from the project management.

In the organization plan, the working group for English has been represented with a large square in order to demonstrate that this working group will be constantly functioning during the course of the project, and will be larger than the others. The English group will consist of (a) one and sometimes several subject specialists (as required) and (b) an educational specialist. In literature research and making up tests, these two will cooperate, otherwise they will have separate fields of activity. The subject specialist is responsible for the development of methods and material, while the educational specialist dealt with planning of the investigation, measurement problems and data processing. Coordination between these assignments will take place at project management level.

The work groups for German and French are only expected to be in existance for shorter periods during the project to work out test procedures for these subjects, and educational material to the extent the arrangement of the investigation effects these subjects, for example with relation to the distribution of teaching hours between the grades.

Other groups

At certain times, other consultants must be co-opted onto the project, for example specialists in the teaching of other subjects such as Swedish, psycholinguists, and possibly specialists to deal with questions of arrangement, and technical problems.

Because of the considerable amount of material to be produced, there will be a periodic requirement for very skilled typing and office staff and some technical assistants, artists and photographers.

The ELD project (English in the Lower Division)
Uppsala Institute of Education

(£ 1 = approximately 12.50 Swedish kronor)

	Budget year				
	1970/71	1971/72	1972/73	1973/74	1974/75
Staff:					
(1) Subject specialists	65 000	70 000	50 000	50 000	25 000
(2) Project Management	45 000	30 000	30 000	20 000	20 000
(3) Educational specialists	35 000	40 000	40 000	45 000	50 000
(4) Consultants	5 000	5 000	5 000	3 000	2 000
(5) Typists	15 000	15 000	15 000	10 000	10 000
(6) Research assistant	5 000	5 000	5 000	5 000	5 000
Total staff costs	170 000	165 000	145 000	133 000	112 000
(7) Equipment					
Typewriters	2 000	1 000			
Calculating machine	4 000				
Tape recorders	2 000				
Punched-card cupboard		1 000			
Non-inventory items					
Paper	5 000	5 000	5 000	5 000	5 000
(8) Magnetic tape	12 000	12 000	3 000	3 000	2 000
(9) Travel expenses	7 000	7 000	7 000	7 000	7 000
Sundries					
(10) Recording tape	12 000	12 000			
(11) Artist	10 000	10 000	(12) 35 000	35 000	35 000
(11) Photographic reproduction	10 000	10 000			
Printing of educational material	15 000	15 000			
Literature	2 000	1 000	1 000	1 000	1 000
Telephone costs	2 000	1 000	1 000	1 000	1 000
TOTAL	253 000	240 000	197 000	185 000	163 000

Budget motivation

Salary codes refer to Swedish Civil Service Pay scales at 1969 levels. (£ 1 = approximately 12.50 Swedish kronor).

1) Subject specialist salaries are at level U 17 (3 628 kronor per month) or U 19 (4 043 kronor per month). It is calculated that during the years 1970/71 and 1971/72 there will be a requirement for 1½ posts for literature investigations and the production of teaching material. In 1972/73 and 1973/74 there will be a requirement for 1 post and in 1974/75 for ½ post.

2) The three lecturers in teaching methods in the project management are each expected to be at the service of the project for a total of 3 months/year during 1970/71, 2 months/year in 1971/72 and 1972/73, and for a somewhat shorter period in 1973/74 and 1974/75. This division of time is a direct consequence of the fact that the compilation of directives for the production of material will be successively reduced, while the scrutinizing work will be constant.

3) The Educational specialist post will be at assistant level. Funds for an assistant lecturer post in the project can be obtained from other sources.

4) Consultant remuneration is per consultation.

5) The typist must be highly-skilled with a good knowledge of languages. 3/4 post in A 13 (1 989 kronor per month) until 1973, and thereafter ½ post.

6) The research assistants will be students of education, teachers etc. Remuneration will be per assignment.

7) Electrical and conventional typewriter, automatic office calculator, tape recorder for high quality recordings (probably ReVox G 39). Having regard to the large number of punched cards which will be collected, a punched-card cupboard will be necessary.

8) Magnetic tape will contain the recorded lesson parts especially for grades 1 and 2. These will also be used for tests. The same tapes will be used in higher grades. Some additions must however be made because of wear etc.

9) Travel expenses are to defray costs for the project staff, but also for student teachers to the extent they will be engaged on the project outside their other duties.

10) The costs refer to the remuneration of professional actors.

11) Primarily the production of large-scale dias for teacher--led instruction.

12) The costs for teaching material may possibly to a certain extent be met by the local educational authorities.

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